

DESCRIPTION

Source Human embryonic kidney cell, HEK293-derived human IL-6R alpha protein
Leu20-Pro365, with a C-terminal 6-His tag
Accession # P08887.1

N-terminal Sequence Analysis Leu20

Predicted Molecular Mass 39 kDa

SPECIFICATIONS

SDS-PAGE 67-73 kDa, under reducing conditions.

Activity Measured by its binding ability in a functional ELISA.
When Recombinant Human IL-6 (Catalog # [7270-IL](#)) is immobilized at 0.25 µg/mL (100 µL/well), Recombinant Human IL-6R alpha His-tag (Catalog # 10537-SR) binds with an ED₅₀ of 0.400-3.60 µg/mL.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 500 µg/mL in PBS.

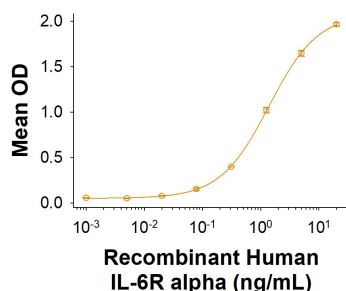
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

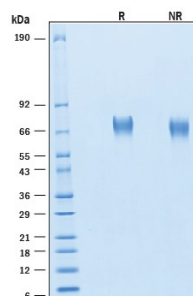
DATA

Binding Activity



Recombinant Human IL-6R alpha His-tag Protein Binding Activity. When Recombinant Human IL-6 (Catalog # [7270-IL](#)) is immobilized at 0.25 µg/mL (100 µL/well), Recombinant Human IL-6R alpha His-tag Protein (Catalog # 10537-SR) binds with an ED₅₀ of 0.400-3.60 µg/mL.

SDS-PAGE



Recombinant Human IL-6R alpha His-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Human IL-6R alpha His-tag Protein (Catalog # 10537-SR) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 67-73 kDa.

BACKGROUND

Interleukin-6 receptor subunit alpha (IL-6Ra), also known as membrane glycoprotein 80 (gp80), IL-6R 1 or CD126, is a single-pass type I membrane protein of the interleukin receptor family. Human IL-6Ra is an 80 kDa receptor component that binds IL-6 with low affinity and forms one-half of the IL-6R receptor complex. IL-6Ra associates with a non-ligand binding 130 kDa glycoprotein signal-transducing component (CD130; gp130) for high-affinity binding to IL-6 (1-4). When bound to IL-6, the IL-6R complex forms a trimer, which homodimerizes to form a hexameric cellular signaling complex (1, 4). Human IL-6Ra consists of an extracellular domain (ECD) with an N-terminal Ig-like C2-type domain and a cytokine-binding domain containing two fibronectin type-III domains with a WSXWS motif, a helical transmembrane segment and a cytoplasmic domain. Within the mature ECD, human IL-6Ra shares 51% and 52% amino acid sequence identity with mouse and rat IL-6Ra, respectively. Soluble forms of IL-6Ra can be generated via ADAM10 and ADAM17 cleavage of membrane bound IL-6Ra, alternative mRNA splicing and microvesicle release (3, 4). Unlike gp130 that is expressed ubiquitously, the cellular distribution of IL-6 R alpha is predominantly limited to hepatocytes and leukocyte subpopulations such as monocytes, neutrophils, T and B cells. Soluble IL-6R alpha has been found in various body fluids (5). It has been documented that elevated soluble IL-6 R is associated with numerous diseases including arthritic lesions, multiple myeloma and Crohn's disease (6, 7).

References:

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3. Dayer, J. and Choy, E. (2009) Rheumatology. **49**:15.
4. Schumacher, N. *et al.* (2015) J. Biol. Chem. **290**:26059.
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7. Jones, S.A. and S. Rose-John (2002) Biochim. Biophys. Acta **1592**:251.